

REMARKS

Claims 1-31 are all the claims pending in the application. Claims 1-3 and 8-24 are withdrawn from consideration as being drawn to a non-elected invention. Claims 4-7 and 25-31 presently stand rejected.

Claim 31 is rejected under 35 U.S.C. § 112, first paragraph, as allegedly claiming material not supported by the specification.

Claims 4-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Okino et al. (USP 4,952,272).

Claims 25-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Okino et al. and vice versa.

Claims 29 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Okino et al. and further in view of Akram et al. (USP 5,686,317).

Claims 4-7 are alternatively rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Okino et al. and vice versa.

For the following reasons, Applicant respectfully traverses the claim rejections and requests favorable disposition of the claims.

§112 Rejection

In response to the rejection under 35 U.S.C. § 112, first paragraph, Applicant submits that the recited limitation requiring the bump portions to have a “beveled gear-shaped cross section” is supported by the specification as originally filed. For example, at least Figs. 1A and 8B, and

their attendant descriptions in the specification support the claimed subject matter. In particular, at paragraph number 34 of the published application (US 2001/0038293 A1) it is stated that bumps 7a of Fig. 1B have a “pointed tapering sharp end.” Thus, from viewing bumps 7a in Fig. 1B in light of the description in the specification, it is clear that bumps 7a have a “beveled gear-shaped cross section.” Further, since the Examiner has not asserted any prior art rejections against claim 31, Applicant requests that claim 31 be found allowable.

§102 Rejection

In regard to the §102 rejection of claims 4-7 as being anticipated by Okino et al., Applicant has amended claim 4 as illustrated above. In particular, Applicant has added the requirement that the recited tapered bump have a “sharp pointed end”. Specifically, at paragraph number 34 of the published application it is disclosed that “bumps 7a each have a pointed tapering *sharp* end” and that each bump “is contacted with, or *pierces*, the corresponding electrode.” Okino et al. fails to teach or suggest this feature.

Okino et al., in comparison, discloses that each probe pin has a “*flat* surface.” (Col. 5, lines 26 and 35). The probe pins disclosed in Okino et al., therefore, do not function the same way as the pointed tapered bump portions of the present application. For example, the probe pins of Okino et al. are designed to merely “come into contact” with the electrode pad (see Col. 2, lines 14-15), whereas the bump portions of the present invention are designed to be able to *pierce* the electrode to ensure better contact. For at least this reason, Okino et al. does not anticipate claim 4, or any claims dependent thereon, specifically, claims 5-7, and the rejection to these claims should be withdrawn.

§103 Rejection

In regard to the §103 rejection of claims 25-28, Applicant has amended claim 25, as illustrated above, to include the requirement that the bump portions have a *sharp* point. For similar reasons to those discussed above in regard to claim 4, Okino et al. does not teach or suggest this feature and, accordingly, the rejection of claims 25-28, as amended, should be withdrawn.

Additionally, Applicant submits that the rejection is improper for §103 purposes. A skilled artisan would not have been motivated to combine the independent teachings of Okino et al. and that of the conventional art disclosed in the present application, that is, absent hindsight reconstruction. In particular, the Examiner asserts that it would have been obvious to modify the method of the disclosed conventional art “by applying the mask/wet etching as taught by [Okino et al.] in order to add strength to the wiring board through the projection electrode.” However, not only does Okino et al. fail to suggest the asserted modification, or basis for making it, the Examiner’s justification is flawed since providing a wet etch process to the projection electrodes disclosed as the conventional art in the specification would not provide any additional strength to the wiring board. For this additional reason the rejection of claims 25-28 should be withdrawn.

In regard to the rejection of claims 29 and 30, Applicant has amended amending claim 29 to clarify that the “pointed blade-shaped bump portions” have a *sharp* end, as opposed to the flat ends disclosed in Akram et al. (see Fig. 4A). Since none of the asserted prior art references, either alone or in combination, teach or suggest this feature, the rejection should be withdrawn.

Additionally, Applicant submits that the §103 rejection of claims 29 and 30 is improper since the suggested combination of references would not have been obvious to a skilled artisan.

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 09/842,047

In particular, a skilled artisan would not have combined the independent teachings of Okino et al, Akram et al. and the disclosed conventional art absent impermissible hindsight gleaned from the present application. For this additional reason, the rejection of claims 29 and 30 should be withdrawn.

Conclusion

In view of the foregoing remarks, the application is believed to be in form for immediate allowance with at least claims 4-7 and 25-31, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to **contact the undersigned** at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

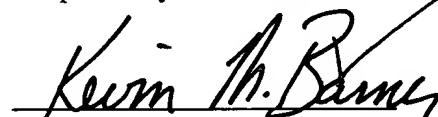
SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Respectfully submitted,



Kevin M. Barner
Registration No. 46,075

Date: August 21, 2003

Attorney Docket No.: Q64291